

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of the claims in the application:

1. (Currently Amended) A method for providing a multicast service from a macrocell or a microcell to a mobile station in a mobile communication system having a hierarchical cell structure in which at least one microcell area overlaps one macrocell area, the method comprising the steps of:

entering, by the mobile station, to the microcell and requesting a multicast service to a base station controller;

determining, by the base station controller, a data rate of the multicast service requested from the mobile station; ~~whether a measured carrier-to-interference ratio (C/I) in the macrocell where the microcell area overlaps satisfies a required C/I for a specific multicast service; and~~

~~receiving by the mobile station the specific multicast service from a base station that controls the macrocell, if the measured C/I satisfies the required C/I~~

measuring, by the mobile station, a carrier-to-interference ratio (C/I) in the macrocell where the microcell area overlaps, and transmitting the measured C/I to the base station controller;

comparing, by the base station controller, the measured C/I with a C/I required based on the determined data rate;

ordering, by the base station controller, the mobile station to perform a handover from the microcell to the macrocell, if the measured C/I is higher than the required C/I.

2. (Cancelled)

3. (Currently Amended) The method of claim [[2]] 1, wherein if a service that the mobile station wants to receive is not-a the multicast service, the mobile station maintains an access to a base station controlling the corresponding microcell or-a the base station controlling the macrocell.

4. (Original) The method of claim 1, wherein even when the measured C/I satisfies the required C/I, the mobile station selectively receives the multicast service from the macrocell and the microcell based on a service state of the microcell to which the mobile station belongs.

5. (Original) The method of claim 1, wherein when the measured C/I does not satisfy the required C/I for the multicast service, the mobile station maintains an access to the base station that controls the corresponding microcell.

6. (Original) The method of claim 1, wherein when the mobile station receives the multicast service from the macrocell, the mobile station measures the C/I in the macrocell area at selected periods, and determines whether the measured C/I satisfies the required C/I for the multicast service, thereby determining whether to perform a handover to the microcell.

7. (Original) The method of claim 1, wherein when an area of the macrocell is divided according to available data rates and the mobile station enters the divided area of the macrocell, the C/I for a data rate of the corresponding area is applied based on whether a multicast service is provided to the mobile station.

8. (Original) The method of claim 7, wherein a data rate which becomes a criterion for the area division is one of 384Kbps, 144Kbps, 64Kbps and 12.2Kbps.

9. (Original) The method of claim 7, wherein different data rates are provided based on distance from a center of the macrocell.

10. (Original) The method of claim 1, wherein the base station can request a particular mobile station to measure the C/I at a particular time or by periods, and compares the measured C/I with the C/I for a particular service to determine whether to perform a handover.

11. (Cancelled)

12. (Original) A method for providing a multicast service using a carrier-to-interference ratio (C/I) in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping

with each other and a mobile station receives the multicast service from the macrocell or the microcell, the method comprising the steps of:

requesting a multicast service that the microcell provides while receiving a call in service in the macrocell;

handing over the call in service in the macrocell to the microcell; and

simultaneously servicing the multicast service and the call in service in the microcell.

13. (Currently Amended) The method of claim ~~[[11]]~~ 12, further comprising:

when a multicast service cannot be provided due to lack of capacity of the microcell, determining whether to accept the multicast service based on a load of the macrocell;

increasing a specific multicast area in the macrocell; and

simultaneously accepting the multicast service and the call in service in the macrocell.

14. (Original) A method for providing a multicast service using a carrier-to-interference ratio (C/I) in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping with each other and a mobile station receives a multicast service from the macrocell or the microcell, the method comprising the steps of:

requesting a multicast service that the macrocell provides while receiving a call in service in the microcell;

handing over a call in service in the microcell to the macrocell; and

simultaneously servicing the multicast service and the call in service in the macrocell.

15. (Currently Amended) The method of claim ~~[[13]]~~ 14, further comprising:
when a multicast service cannot be provided due to lack of capacity of the macrocell,
determining whether to accept the multicast service based on a load of the microcell;
increasing a specific multicast area in the microcell; and
simultaneously accepting the multicast service and the call in service in the microcell.

16. (Currently Amended) A method for providing a multicast service using a carrier-to-interference ratio (C/I) in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping with each other and a mobile station receives the multicast service from the macrocell or the microcell, the method comprising the steps of:

requesting a multicast service that the microcell provides while receiving a call in service in the microcell;

determining that the multicast service requires a higher ~~[[date]]~~ data rate than the microcell usually provides; and

simultaneously servicing the multicast service and the call in service in the microcell.